Dialog eLink: Order File History

Generating and implementing communication protocol and interface for high data rate signal transfer between host and client over communication path using linked packet structures
Patent Assignee: QUALCOMM INC
Inventors: STEELE B; WILEY G A; ZOU Q; BRIAN W G A Z Q

Patent Family (17 patents, 98 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2002049314	A2	20020620	WO 2001US47807	A	20011214	200256	B
AU 200227359	A	20020624	AU 200227359	A	20011214	200267	E
EP 1342352	A2	20030910	EP 2001996216	A	20011214	200367	E
			WO 2001US47807	A	20011214		
KR 2003061001	A	20030716	KR 2003708002	A	20030614	200381	E
BR 200116157	A	20040706	BR 200116157	A	20011214	200445	E
			WO 2001US47807	A	20011214		
TW 577208	A	20040221	TW 2001131226	A	20011217	200455	E
JP 2004531916	W	20041014	WO 2001US47807	A	20011214	200467	E
			JP 2002550691	A	20011214		
MX 2003005310	A1	20040401	WO 2001US47807	A	20011214	200478	E
			MX 20035310	A	20030613		
CN 1543734	A	20041103	CN 2001822583	A	20011214	200514	E
IN 200300938	P4	20050422	US 200585826	A	20050321	200560	E
			IN 2003CN938	A	20030613		
AU 2006230711	A1	20061109	AU 2002227359	A	20011211	200724	NCE
			AU 2006230711	A	20061020		
AU 2002227359	B2	20061207	AU 2002227359	A	20011214	200729	E
CN 101030952	A	20070905	CN 200710087664	A	20011214	200810	E
IN 200703211	P4	20071221	WO 2001US47807	A	20011214	200846	E
			IN 2003CN938	A	20011214		
			IN 2007CN3211	A	20070720		
AU 2009200172	A1	20090212	AU 2006230711	A	20061020	200953	NCE
			AU 2009200172	A	20090116		
KR 2009087513	A	20090817	WO 2001US47807	A	20011214	200958	E
			KR 2003708002	A	20030614		
			KR 2009716066	A	20011214		

CN 100473058	C	20090325	CN 2001822583	A	20011214	200971	E

Priority Application Number (Number Kind Date): US 2000255833 P 20001215; AU 2006230711 A 20061020; AU 2009200172 A 20090116

Patent Details

Patent Number	Kind	Language	Pages	Drawings	Filing Notes
WO 2002049314	A2	EN	140	55	
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW				
Regional Designated States,Original	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW				
AU 200227359	A	EN			Based on OPI patent WO 2002049314
EP 1342352	A2	EN			PCT Application WO 2001US47807
					Based on OPI patent WO 2002049314
Regional Designated States,Original	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR				
BR 200116157	A	PT			PCT Application WO 2001US47807
					Based on OPI patent WO 2002049314
TW 577208	A	ZH			
JP 2004531916	W	JA	240		PCT Application WO 2001US47807
					Based on OPI patent WO

					2002049314
MX 2003005310	A1	ES			PCT Application WO 2001US47807
					Based on OPI patent WO 2002049314
IN 200300938	P4	EN			PCT Application US 200585826
AU 2006230711	A1	EN			Division of application AU 2002227359
AU 2002227359	B2	EN			Based on OPI patent WO 2002049314
IN 200703211	P4	EN			PCT Application WO 2001US47807
					Division of application IN 2003CN938
AU 2009200172	A1	EN			Division of application AU 2006230711
KR 2009087513	A	KO			PCT Application WO 2001US47807
					Division of application KR 2003708002
					Based on OPI patent WO 2002049314

Alerting Abstract: WO A2

NOVELTY - Universal serial bus host and client devices (401,410) are used in implementing type U interface versions of the mobile digital data interface and low voltage signals are used to transfer data over differential pairs of wires in a cable in both directions via a communication channel (406). The host and client controllers can be manufactured in a single integrated circuit using a single circuit design that can be set, adjusted and programmed to respond to either controller.

DESCRIPTION - INDEPENDENT CLAIMS are included for a digital data transfer method and apparatus, for a computer readable medium with program code and for a processor.

USE - Generating and implementing communication protocol and interface with direct signal transfer.

ADVANTAGE - Increased data throughput.

DESCRIPTION OF DRAWINGS - The drawing shows use of the controller

401,410 Host and client devices

406 Communication channel

International Classification (Main): H04J-003/06, H04L-029/00, H04L-029/08, H04L-029/10
(Additional/Secondary): H04L-012/56, H04N-007/08, H04N-007/081

International Patent Classification

IPC	Level	Value	Position	Status	Version
H04J-0003/06	A	I		R	20060101
H04J-0003/06	A	I	L	B	20060101
H04L-0012/56	A	I	L	B	20060101
H04L-0012/56	A	I		R	20060101
H04L-0012/64	A	I		R	20060101
H04L-0012/64	A	I	L	B	20060101
H04L-0012/64	A	I	F	B	20060101
H04L-0029/00	A	I	L	B	20060101
H04L-0029/00	A	I	F	B	19900101
H04L-0029/00	A	I		R	20060101
H04L-0029/08	A	I	L	B	20060101
H04L-0029/08	A	I	F		20060101
H04L-0029/08	A	I	L	R	20060101
H04L-0029/10	A	I	L		20060101
H04M-0001/725	A	N	L	B	20060101
H04M-0001/725	A	N		R	20060101
H04N-0007/08	A	I	F	B	20060101
H04N-0007/08	A	I	L	B	20060101
H04N-0007/08	A	I	F	R	20060101
H04N-0007/081	A	I	L	B	20060101
H04N-0007/081	A	I	L	R	20060101
H04J-0003/06	C	I		R	20060101

H04J-0003/06	C	I		B	20060101
H04J-0003/06	C	I	L	B	20090101
H04L	S	I		R	20060101
H04L-0012/56	C	I	L	B	20060101
H04L-0012/56	C	I		B	20060101
H04L-0012/56	C	I		R	20060101
H04L-0012/64	C	I		R	20060101
H04L-0012/64	C	I	L	B	20060101
H04L-0012/64	C	I		B	20060101
H04L-0012/64	C	I	F	B	20090101
H04L-0029/00	C	I	F	B	20060101
H04L-0029/00	C	I	L	B	20060101
H04L-0029/00	C	I		R	20060101
H04L-0029/08	C	I	L	B	20060101
H04L-0029/08	C	I		B	20060101
H04L-0029/08	C	I			20060101
H04L-0029/08	C	I	L	R	20060101
H04L-0029/10	C	I			20060101
H04M-0001/72	C	N	L	B	20060101
H04M-0001/72	C	N		R	20060101
H04N-0007/08	C	I	L	B	20060101
H04N-0007/08	C	I	F	B	20060101
H04N-0007/08	C	I		B	20060101
H04N-0007/08	C	I	F	R	20060101
H04N-0007/081	C	I	L	B	20060101
H04N-0007/081	C	I		B	20060101
H04N-0007/081	C	I	L	R	20060101

Original Publication Data by Authority

Australia
Publication Number: AU 2002227359 B2 (Update 200729 E)
Publication Date: 20061207
Assignee: QUALCOMM INC (QCOM)
Inventor: WILEY G A ZOU Q STEELE B
Language: EN
Application: AU 2002227359 A 20011214 (Local application)
Priority: US 2000255833 P 20001215
Related Publication: WO 2002049314 A (Based on OPI patent)
Original IPC: H04J-3/06(B,I,M,EP,20060101,20051110,A,L) H04J-3/06

(B,I,M,98,20060101,20051110,C) H04L-12/56(B,I,M,EP,20060101,20060722,A,L) H04L-12/56
(B,I,M,98,20060101,20060722,C) H04L-12/64(B,I,M,EP,20060101,20051110,A,L) H04L-12/64
(B,I,M,98,20060101,20051110,C) H04L-29/00(B,I,M,EP,20060101,20051110,A,L) H04L-29/00
(B,I,M,98,20060101,20051110,C) H04L-29/08(B,I,M,JP,20060101,20051220,A,L) H04L-29/08
(B,I,M,98,20060101,20051220,C) H04M-1/72(B,N,M,98,20060101,20060722,C) H04M-1/725
(B,N,M,EP,20060101,20060722,A,L) H04N-7/08(B,I,M,JP,20060101,20051220,A,F) H04N-7/08
(B,I,M,98,20060101,20051220,C) H04N-7/081(B,I,M,JP,20060101,20051220,A,L) H04N-7/081
(B,I,M,98,20060101,20051220,C)
Current IPC: H04J-3/06(B,I,M,EP,20060101,20051110,A,L) H04J-3/06
(B,I,M,EP,20060101,20051110,C,L) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56
(B,I,M,EP,20060101,20060722,A,L) H04L-12/56(B,I,M,EP,20060101,20060722,C,L) H04L-12/64
(B,I,M,EP,20060101,20051110,A,L) H04L-12/64(B,I,M,EP,20060101,20051110,C,L) H04L-29/00
(B,I,M,EP,20060101,20051110,A,L) H04L-29/00(B,I,M,EP,20060101,20051110,C,L) H04L-29/08
(B,I,M,JP,20060101,20051220,A,L) H04L-29/08(B,I,M,JP,20060101,20051220,C,L) H04M-1/72
(B,N,M,EP,20060101,20060722,C,L) H04M-1/725(B,N,M,EP,20060101,20060722,A,L) H04N-7/08
(B,I,M,JP,20060101,20051220,A,F) H04N-7/08(B,I,M,JP,20060101,20051220,C,F) H04N-7/081
(B,I,M,JP,20060101,20051220,A,L) H04N-7/081(B,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-80:00|AU 200227359 A (Update 200267 E)
Publication Date: 20020624
Assignee: QUALCOMM INC; US (QCOM)
Language: EN
Application: AU 200227359 A 20011214 (Local application)
Priority: US 2000255833 P 20001215
Related Publication: WO 2002049314 A (Based on OPI patent)
Original IPC: H04L-29/00(A)
Current IPC: H04J-3/06(R,I,M,EP,20060101,20051110,A) H04J-3/06(R,I,M,EP,20060101,20051110,C)
H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56(R,I,M,EP,20060101,20060722,A) H04L-12/56
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(R,N,M,EP,20060101,20060722,A) H04N-7/08(R,I,M,JP,20060101,20051220,A,F) H04N-7/08
(R,I,M,JP,20060101,20051220,C,F) H04N-7/081(R,I,M,JP,20060101,20051220,A,L) H04N-7/081
(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00|AU 2006230711 A1 (Update 200724 NCE)
Publication Date: 20061109
Assignee: QUALCOMM INC (QCOM)
Language: EN
Application: AU 2002227359 A 20011211 (Division of application) AU 2006230711 A 20061020
(Local application)
Priority: AU 2006230711 A 20061020 (Local application)
Original IPC: H04J-3/06(B,I,M,AU,20060101,20061024,A,L) H04J-3/06
(B,I,M,98,20060101,20061024,C) H04L-12/56(B,I,M,AU,20060101,20061024,A,L) H04L-12/56
(B,I,M,98,20060101,20061024,C) H04L-12/64(B,I,M,AU,20060101,20061024,A,L) H04L-12/64
(B,I,M,98,20060101,20061024,C) H04L-29/00(B,I,M,AU,20060101,20061024,A,F) H04L-29/00
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(B,I,M,98,20060101,20061024,C) H04N-7/08(B,I,M,AU,20060101,20061024,A,L) H04N-7/08
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Current IPC: H04J-3/06(B,I,M,AU,20060101,20061024,A,L) H04J-3/06
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(B,I,M,AU,20060101,20061024,C,L) H04N-7/081(B,I,M,AU,20060101,20061024,A,L) H04N-7/081
(B,I,M,AU,20060101,20061024,C,L)
Current ECLA class: H04M-1/725F1B
Current ECLA ICO class: T04J-3:06A1A T04M-1:60T2BlAU 2009200172 A1 (Update 200953 NCE)
Publication Date: 20090212
Assignee: QUALCOMM INC (QCOM)
Inventor: STEELE B WILEY G A ZOU Q
Language: EN
Application: AU 2009200172 A 20090116 (Local application) AU 2006230711 A 20061020 (Division of application)
Priority: AU 2009200172 A 20090116 (Local application)
Original IPC: H04J-3/06(B,I,M,AU,20060101,20090127,A,L) H04J-3/06
(B,I,M,98,20060101,20090127,C) H04L-12/56(B,I,M,AU,20060101,20090127,A,L) H04L-12/56
(B,I,M,98,20060101,20090127,C) H04L-12/64(B,I,M,AU,20060101,20090127,A,L) H04L-12/64
(B,I,M,98,20060101,20090127,C) H04L-29/00(B,I,M,AU,19900101,20090127,A,F) H04L-29/08
(B,I,M,AU,20060101,20090127,A,L) H04L-29/08(B,I,M,98,20060101,20090127,C) H04N-7/08
(B,I,M,AU,20060101,20090127,A,L) H04N-7/08(B,I,M,98,20060101,20090127,C) H04N-7/081
(B,I,M,AU,20060101,20090127,A,L) H04N-7/081(B,I,M,98,20060101,20090127,C)
Current IPC: H04J-3/06(B,I,M,AU,20060101,20090127,A,L) H04J-3/06
(B,I,M,98,20060101,20090127,C) H04L-12/56(B,I,M,AU,20060101,20090127,A,L) H04L-12/56
(B,I,M,98,20060101,20090127,C) H04L-12/64(B,I,M,AU,20060101,20090127,A,L) H04L-12/64
(B,I,M,98,20060101,20090127,C) H04L-29/00(B,I,M,AU,19900101,20090127,A,F) H04L-29/08
(B,I,M,AU,20060101,20090127,A,L) H04L-29/08(B,I,M,98,20060101,20090127,C) H04N-7/08
(B,I,M,AU,20060101,20090127,A,L) H04N-7/08(B,I,M,98,20060101,20090127,C) H04N-7/081
(B,I,M,AU,20060101,20090127,A,L) H04N-7/081(B,I,M,98,20060101,20090127,C)
Current ECLA class: H04M-1/725F1B
Current ECLA ICO class: T04J-3:06A1A T04M-1:60T2B

Brazil

Publication Number: BR 200116157 A (Update 200445 E)
Publication Date: 20040706
Assignee: QUALCOMM INC (QCOM)
Inventor: ZOU Q WILEY G A STEELE B
Language: PT
Application: BR 200116157 A 20011214 (Local application) WO 2001US47807 A 20011214 (PCT Application)
Priority: US 2000255833 P 20001215
Related Publication: WO 2002049314 A (Based on OPI patent)
Original IPC: H04L-12/64(A) H04J-3/06(B)
Current IPC: H04J-3/06(R,A,I,M,EP,20060101,20051110,A) H04J-3/06
(R,I,M,EP,20060101,20051110,C) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56
(R,I,M,EP,20060101,20060722,A) H04L-12/56(R,I,M,EP,20060101,20060722,C) H04L-12/64
(R,I,M,EP,20060101,20051110,A) H04L-12/64(R,I,M,EP,20060101,20051110,C) H04L-29/00
(R,I,M,EP,20060101,20051110,A) H04L-29/00(R,I,M,EP,20060101,20051110,C) H04L-29/08
(R,I,M,JP,20060101,20051220,A,L) H04L-29/08(R,I,M,JP,20060101,20051220,C,L) H04M-1/72

(R,N,M,EP,20060101,20060722,C) H04M-1/725(R,N,M,EP,20060101,20060722,A) H04N-7/08
(R,I,M,JP,20060101,20051220,A,F) H04N-7/08(R,I,M,JP,20060101,20051220,C,F) H04N-7/081
(R,I,M,JP,20060101,20051220,A,L) H04N-7/081(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00

China
Publication Number: CN 100473058 C (Update 200971 E)
Publication Date: 20090325
Generating and implementing a communication protocol and interface for high data rate signal transfer
Assignee: QUALCOMM INC (QCOM)
Inventor: STEELE B WILEY G A ZOU Q
Language: ZH
Application: CN 2001822583 A 20011214 (Local application)
Priority: US 2000255833 P 20001215
Original IPC: H04J-3/06(I,CN,20060101,A,L) H04J-3/06(I,M,98,20060101,C) H04L-12/64 (I,CN,20060101,A,F) H04L-12/64(I,M,98,20060101,C)
Current IPC: H04J-3/06(B,I,H,CN,20060101,20090325,A,L) H04J-3/06 (B,I,H,CN,20090101,20090325,C,L) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56 (R,I,M,EP,20060101,20060722,A) H04L-12/56(R,I,M,EP,20060101,20060722,C) H04L-12/64 (B,I,H,CN,20060101,20090325,A,F) H04L-12/64(B,I,H,CN,20090101,20090325,C,F) H04L-29/00 (R,I,M,EP,20060101,20051110,A) H04L-29/00(R,I,M,EP,20060101,20051110,C) H04L-29/08 (R,I,M,JP,20060101,20051220,A,L) H04L-29/08(R,I,M,JP,20060101,20051220,C,L) H04M-1/72 (R,N,M,EP,20060101,20060722,C) H04M-1/725(R,N,M,EP,20060101,20060722,A) H04N-7/08 (R,I,M,JP,20060101,20051220,A,F) H04N-7/08(R,I,M,JP,20060101,20051220,C,F) H04N-7/081 (R,I,M,JP,20060101,20051220,A,L) H04N-7/081(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-80:00|CN 101030952 A (Update 200810 E)
Publication Date: 20070905
Generation and realization of the communication protocol and interface for high data speed signal transmission
Assignee: QUALCOMM INC; US (QCOM)
Inventor: BRIAN W G A Z Q
Language: ZH
Application: CN 200710087664 A 20011214 (Local application)
Priority: US 2000255833 P 20001215
Original IPC: H04J-3/06(I,CN,20060101,A,L) H04J-3/06(I,M,98,20060101,C) H04L-12/64 (I,CN,20060101,A,F) H04L-12/64(I,M,98,20060101,C)
Current IPC: H04J-3/06(B,A,I,H,CN,20060101,20070905,A,L) H04J-3/06 (B,I,H,CN,20060101,20070905,C,L) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56 (R,I,M,EP,20060101,20060722,A) H04L-12/56(R,I,M,EP,20060101,20060722,C) H04L-12/64 (B,I,H,CN,20060101,20070905,A,F) H04L-12/64(B,I,H,CN,20060101,20070905,C,F) H04L-29/00 (R,I,M,EP,20060101,20051110,A) H04L-29/00(R,I,M,EP,20060101,20051110,C) H04L-29/08 (R,I,M,JP,20060101,20051220,A,L) H04L-29/08(R,I,M,JP,20060101,20051220,C,L) H04M-1/72 (R,N,M,EP,20060101,20060722,C) H04M-1/725(R,N,M,EP,20060101,20060722,A) H04N-7/08 (R,I,M,JP,20060101,20051220,A,F) H04N-7/08(R,I,M,JP,20060101,20051220,C,F) H04N-7/081 (R,I,M,JP,20060101,20051220,A,L) H04N-7/081(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-80:00
Original Abstract: The invention claims a communication protocol for transmitting a group of pre-

chosen digital control and displaying data formed by using the data interface for transmitting digital data between host computer and client computer on the communication passage connected together by group structures. The signal protocol is used by chain circuit controller for generating, transmitting and receiving the group forming communication protocol and combing the digital data in one or more types of data group, wherein at least one group stays in host computer device and couples to client computer through communication passage. The interface provides a bidirectional high-speed data transmitting mechanism with reasonable cost and low power on the short-path serial type data chain circuit, which drives its realization by micro-connector and thin bending cable. They are especially useful when connecting displaying components such as wearable displayer to portable computer and wireless communication device.
Claim: A state machine for gaining synchronization in electronic system, said electronic system is for transmitting digital data with high speed between the host computer device and client computer device on communication passage; said state machine is deployed by mean that it has the synchronization regime of at least one async frames state, the synchronization regime of at least two acquiring sync states and the synchronization regime of at least three in-sync states.lCN 1543734 A (Update 200514 E)
Publication Date: 20041103
Assignee: QUALCOMM INC; US (QCOM)
Language: ZH
Application: CN 2001822583 A 20011214 (Local application)
Priority: US 2000255833 P 20001215
Original IPC: H04L-12/64(A) H04J-3/06(B)
Current IPC: H04J-3/06(R,A,I,M,EP,20060101,20051110,A) H04J-3/06 (R,I,M,EP,20060101,20051110,C) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56 (R,I,M,EP,20060101,20060722,A) H04L-12/56(R,I,M,EP,20060101,20060722,C) H04L-12/64 (R,I,M,EP,20060101,20051110,A) H04L-12/64(R,I,M,EP,20060101,20051110,C) H04L-29/00 (R,I,M,EP,20060101,20051110,A) H04L-29/00(R,I,M,EP,20060101,20051110,C) H04L-29/08 (R,I,M,JP,20060101,20051220,A,L) H04L-29/08(R,I,M,JP,20060101,20051220,C,L) H04M-1/72 (R,N,M,EP,20060101,20060722,C) H04M-1/725(R,N,M,EP,20060101,20060722,A) H04N-7/08 (R,I,M,JP,20060101,20051220,A,F) H04N-7/08(R,I,M,JP,20060101,20051220,C,F) H04N-7/081 (R,I,M,JP,20060101,20051220,A,L) H04N-7/081(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00

European Patent Office
Publication Number: EP 1342352 A2 (Update 200367 E)
Publication Date: 20030910
ERZEUGUNG UND IMPLEMENTIERUNG EINEN KOMMUNIKATIONSPROTOKOLL UND EIN KOMMUNIKATUINSSCHINTSTELLE FUR EINE HOHE DATENRATE SIGNALUBERTRAGUNG GENERATING AND IMPLEMENTING A COMMUNICATION PROTOCOL AND INTERFACE FOR HIGH DATA RATE SIGNAL TRANSFER ETABLISSEMENT ET MISE EN OEUVRE D'UN PROTOCOLE DE COMMUNICATION POUR LE TRANSFERT DE SIGNAUX A DEBIT BINAIRE ELEVE
Assignee: QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, CA 92121-1714, US (QCOM)
Inventor: ZOU, Qiuzhen, 5791 Rutgets Road, La Jolla, CA 92037, US WILEY, George, A., 5775 Morehouse Drive, San Diego, CA 92121, US STEELE, Brian, 5775 Morehouse Drive, San Diego, CA 92121, US
Agent: Walsh, Michael Joseph, TOMKINS CO., 5, Dartmouth Road, Dublin 6, IE
Language: EN
Application: EP 2001996216 A 20011214 (Local application) WO 2001US47807 A 20011214 (PCT Application)

Priority: US 2000255833 P 20001215
Related Publication: WO 2002049314 A (Based on OPI patent)
Designated States: (Regional Original) AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
Original IPC: H04L-12/64(A) H04J-3/06(B)
Current IPC: H04J-3/06(R,A,I,M,EP,20060101,20051110,A) H04J-3/06 (R,I,M,EP,20060101,20051110,C) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56 (R,I,M,EP,20060101,20060722,A) H04L-12/56(R,I,M,EP,20060101,20060722,C) H04L-12/64 (R,I,M,EP,20060101,20051110,A) H04L-12/64(R,I,M,EP,20060101,20051110,C) H04L-29/00 (R,I,M,EP,20060101,20051110,A) H04L-29/00(R,I,M,EP,20060101,20051110,C) H04L-29/08 (R,I,M,JP,20060101,20051220,A,L) H04L-29/08(R,I,M,JP,20060101,20051220,C,L) H04M-1/72 (R,N,M,EP,20060101,20060722,C) H04M-1/725(R,N,M,EP,20060101,20060722,A) H04N-7/08 (R,I,M,JP,20060101,20051220,A,F) H04N-7/08(R,I,M,JP,20060101,20051220,C,F) H04N-7/081 (R,I,M,JP,20060101,20051220,A,L) H04N-7/081(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00
Original Abstract: A data Interface for transferring digital data between a host and a client over a communication path using packet structures linked together to form a communication protocol for communicating a pre-selected set of digital control and presentation data. The signal protocol is used by link controllers configured to generate, transmit, and receive packets forming the communications protocol, and to form digital data into one or more types of data packets, with at least one residing in the host device and being coupled to the client through the communications path. The interface provides a cost-effective, low power, bi-directional, high-speed data transfer mechanism over a short-range "serial" type data link, which lends itself to implementation with miniature connectors and thin flexible cables which are especially useful in connecting display elements such as wearable micro-displays to portable computers and wireless communication devices.

India
Publication Number: IN 200300938 P4 (Update 200560 E)
Publication Date: 20050422
Assignee: QUALCOMM INC; US (QCOM)
Inventor: ZOU Q STEELE B WILEY G A
Language: EN
Application: EP 2001996216 A 20011214 (PCT Application) IN 2003CN938 A 20030613 (Local application)
Priority: US 2000255833 P 20001215
Original IPC: H04L-29/00(A)
Current IPC: H04L-29/00(A)IN 200703211 P4 (Update 200846 E)
Publication Date: 20071221
Assignee: QUALCOMM INC; US (QCOM)
Inventor: ZOU Q STEELE B WILEY G A
Language: EN
Application: WO 2001US47807 A 20011214 (PCT Application) IN 2003CN938 A 20011214 (Division of application) IN 2007CN3211 A 20070720 (Local application)
Priority: US 2000255833 P 20001215
Original IPC: H04J-3/06(A)
Current IPC: H04J-3/06(A)

Japan
Publication Number: JP 2004531916 W (Update 200467 E)
Publication Date: 20041014

Assignee: QUALCOMM INC; US (QCOM)
Language: JA (240 pages)
Application: WO 2001US47807 A 20011214 (PCT Application) JP 2002550691 A 20011214 (Local application)
Priority: US 2000255833 P 20001215
Related Publication: WO 2002049314 A (Based on OPI patent)
Original IPC: H04L-29/08(A) H04L-12/56(B) H04N-7/08(B) H04N-7/081(B)
Current IPC: H04L-29/08(A) H04L-12/56(B) H04N-7/08(B) H04N-7/081(B)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00
Current JP FI-Terms: H04L-12/56 230 Z H04L-13/00 307 Z H04N-7/08 Z
Current JP F-Terms: 5C063 5K030 5K034 5K034AA01 5C063AB03 5C063AB05 5C063AC01 5C063AC05 5C063AC10 5C063CA23 5C063CA36 5K034CC02 5K034CC06 5C063DA07 5C063DA13 5K034EE03 5K034EE05 5K034FF01 5K034FF13 5K034FF20 5K030GA19 5K034GG05 5K030HA08 5K030HB02 5K030HB21 5K030HD03 5K034HH04 5K034HH06 5K030JA07 5K030JT06 5K030KA21 5K034KK02 5K030LA15 5K030MB08

Republic of Korea
Publication Number: KR 2003061001 A (Update 200381 E)
Publication Date: 20030716
Assignee: QUALCOMM INC (QCOM)
Language: KO
Application: KR 2003708002 A 20030614 (Local application)
Priority: US 2000255833 P 20001215
Original IPC: H04L-29/10(A)
Current IPC: H04L-29/10(A)|KR 2009087513 A (Update 200958 E)
Publication Date: 20090817
The high data rate interface providing the improved link control.
Assignee: QUALCOMM INC; US (QCOM)
Inventor: STEELE B STEELE,Brian WILEY G A WILEY,George, A. ZOU Q ZOU,Qiuzhen
Language: KO
Application: KR 2009716066 A 20011214 (Local application) WO 2001US47807 A 20011214 (PCT Application) KR 2003708002 A 20030614 (Division of application)
Priority: US 2000255833 P 20001215
Related Publication: WO 2002049314 A (Based on OPI patent)
Original IPC: H04L-29/08(I,KR,20060101,A,F) H04L-29/08(I,M,98,20060101,C) H04L-29/10 (I,KR,20060101,A,L) H04L-29/10(I,M,98,20060101,C)
Current IPC: H04L-29/08(I,KR,20060101,A,F) H04L-29/08(I,M,98,20060101,C) H04L-29/10 (I,KR,20060101,A,L) H04L-29/10(I,M,98,20060101,C)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-80:00
Original Abstract: Step of doing the drive to the logic one state for the range that is the method for doing the digital data interface communications data link with the start up (start up), and is data signal predetermined with the first of strobe cycle: step of operating to the logic zero state for the range that is data signal predetermined with the second of strobe cycle: step of doing with the initiation (commence) the digital data interface communications link in response to the range predetermined with the first of strobe cycle and the range completion predetermined with the second of strobe cycle according to one aspect of the present invention: and, the digital data interface communications data link startup procedure for including the step of transmitting sub-frame header packet is suggested.Image 1/1
Claim: [CLAIM 1] Step of doing the drive to the logic one state for the range that is the method for doing the digital data interface communications data link with the start up (start up); and is data signal

predetermined with the first of strobe cycle: step of operating to the logic zero state for the range that is data signal predetermined with the second of strobe cycle: step of doing with the initiation (commence) the digital data interface communications link in response to the range predetermined with the first of strobe cycle and the range completion predetermined with the second of strobe cycle: and, the digital data interface communications data link startup procedure for including the step of transmitting sub-frame header packet. [CLAIM 2] The digital data interface communications data link startup procedure which data signal is comprised of the differential pair as to claim 1. [CLAIM 3] The range predetermined as to claim 1 with the first of strobe cycle is 140 strobe cycle and 160 strobe cycle interval phosphorus, and the digital data interface communications data link startup procedure. [CLAIM 4] The range predetermined as to claim 1 with the second of strobe cycle is 40 strobe cycle and 60 strobe cycle interval phosphorus, and the digital data interface communications data link startup procedure. [CLAIM 5] The means: means disclosing the digital data interface communications link in response to the predetermined range and the range completion predetermined with the second of strobe cycle operates data signal to the logic zero state for the range predetermined with the second of strobe cycle data signal for the range predetermined with the first of strobe cycle to the logic one state the drive it is the system doing the digital data interface communications data link with the start up (start up): and, the digital data interface communications data link start up system including the means transmitting the sub-frame header packet. [CLAIM 6] The digital data interface communications data link start up system which data signal is comprised of differential pair as to claim 5. [CLAIM 7] The range predetermined as to claim 5 with the first of strobe cycle is 140 strobe cycle and 160 strobe cycle interval phosphorus, and the digital data interface communications data link start up system. [CLAIM 8] The range predetermined as to claim 5 with the second of strobe cycle is 40 strobe cycle and 60 strobe cycle interval phosphorus, and the digital data interface communications data link start up system. [CLAIM 9] The code: code: code in which the digital data interface communications link is disclosed in response to the predetermined range and the range completion predetermined with the second of strobe cycle operates data signal to the logic zero state for the range predetermined with the second of strobe cycle the computer code operates data signal to the logic one state for the range predetermined with the first of strobe cycle it is the computer-readable media storing the code in which the digital data interface communications data link starts up: and, the computer-readable media including the code in which the sub-frame header packet is transmitted. [CLAIM 10] The computer-readable media which data signal is comprised of differential pair as to claim 9. [CLAIM 11] The range predetermined as to claim 9 with the first of strobe cycle is 140 strobe cycle and 160 strobe cycle interval phosphorus, and the computer-readable media. [CLAIM 12] The range predetermined as to claim 9 with the second of strobe cycle is 40 strobe cycle and 60 strobe cycle interval phosphorus, and the computer-readable media.

Mexico
Publication Number: MX 2003005310 A1 (Update 200478 E)
Publication Date: 20040401
Assignee: QUALCOMM INC (QCOM)
Inventor: ZOU Q WILEY G A STEELE B
Language: ES
Application: WO 2001US47807 A 20011214 (PCT Application) MX 20035310 A 20030613 (Local application)
Priority: US 2000255833 P 20001215
Related Publication: WO 2002049314 A (Based on OPI patent)
Original IPC: H04L-29/00(A)
Current IPC: H04J-3/06(R,I,M,EP,20060101,20051110,A) H04J-3/06(R,I,M,EP,20060101,20051110,C) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56(R,I,M,EP,20060101,20060722,A) H04L-12/56 (R,I,M,EP,20060101,20060722,C) H04L-12/64(R,I,M,EP,20060101,20051110,A) H04L-12/64 (R,I,M,EP,20060101,20051110,C) H04L-29/00(R,I,M,EP,20060101,20051110,A) H04L-29/00 (R,I,M,EP,20060101,20051110,C) H04L-29/08(R,I,M,JP,20060101,20051220,A,L) H04L-29/08

(R,I,M,JP,20060101,20051220,C,L) H04M-1/72(R,N,M,EP,20060101,20060722,C) H04M-1/725
(R,N,M,EP,20060101,20060722,A) H04N-7/08(R,I,M,JP,20060101,20051220,A,F) H04N-7/08
(R,I,M,JP,20060101,20051220,C,F) H04N-7/081(R,I,M,JP,20060101,20051220,A,L) H04N-7/081
(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00

Taiwan
Publication Number: TW 577208 A (Update 200455 E)
Publication Date: 20040221
Assignee: QUALCOMM INC; US (QCOM)
Language: ZH
Application: TW 2001131226 A 20011217 (Local application)
Priority: US 2000255833 P 20001215
Original IPC: H04L-29/00(A) H04L-29/00(A)
Current IPC: H04L-29/00(A)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00

WIPO
Publication Number: WO 2002049314 A2 (Update 200256 B)
Publication Date: 20020620
GENERATING AND IMPLEMENTING A COMMUNICATION PROTOCOL AND INTERFACE FOR HIGH DATA RATE SIGNAL TRANSFER ETABLISSEMENT ET MISE EN OEUVRE D'UN PROTOCOLE DE COMMUNICATION POUR LE TRANSFERT DE SIGNAUX A DEBIT BINAIRE ELEVE
Assignee: ~(only US)~ ZOU, Qiuzhen, 5791 Rutgets Road, La Jolla, CA 92037, US Residence: -- Nationality: -- ~(only US)~ WILEY, George, A., 5775 Morehouse Drive, San Diego, CA 92121, US Residence: -- Nationality: -- ~(only US)~ STEELE, Brian, 5775 Morehouse Drive, San Diego, CA 92121, US Residence: -- Nationality: -- ~(except US)~ QUALCOMM INCORPORATED, 5775 Morhouse Drive, San Diego, CA 92121-1714, US Residence: US Nationality: US (QCOM)
Inventor: ZOU, Qiuzhen, 5791 Rutgets Road, La Jolla, CA 92037, US Residence: -- Nationality: -- WILEY, George, A., 5775 Morehouse Drive, San Diego, CA 92121, US Residence: -- Nationality: -- STEELE, Brian, 5775 Morehouse Drive, San Diego, CA 92121, US Residence: -- Nationality: --
Agent: WADSWORTH, Philip, R., Qualcomm Incorporated, 5775 Morehouse Drive, San Diego, CA 92121-1714, US
Language: EN (140 pages, 55 drawings)
Application: WO 2001US47807 A 20011214 (Local application)
Priority: US 2000255833 P 20001215
Designated States: (National Original) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW (Regional Original) AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
Original IPC: H04L-29/00(A)
Current IPC: H04J-3/06(R,A,I,M,EP,20060101,20051110,A) H04J-3/06
(R,I,M,EP,20060101,20051110,C) H04L(R,I,M,EP,20060101,20051110,S) H04L-12/56
(R,I,M,EP,20060101,20060722,A) H04L-12/56(R,I,M,EP,20060101,20060722,C) H04L-12/64
(R,I,M,EP,20060101,20051110,A) H04L-12/64(R,I,M,EP,20060101,20051110,C) H04L-29/00
(R,I,M,EP,20060101,20051110,A) H04L-29/00(R,I,M,EP,20060101,20051110,C) H04L-29/08

(R,I,M,JP,20060101,20051220,A,L) H04L-29/08(R,I,M,JP,20060101,20051220,C,L) H04M-1/72 (R,N,M,EP,20060101,20060722,C) H04M-1/725(R,N,M,EP,20060101,20060722,A) H04N-7/08 (R,I,M,JP,20060101,20051220,A,F) H04N-7/08(R,I,M,JP,20060101,20051220,C,F) H04N-7/081 (R,I,M,JP,20060101,20051220,A,L) H04N-7/081(R,I,M,JP,20060101,20051220,C,L)
Current ECLA class: H04L-12/56B H04L-29/08N35
Current ECLA ICO class: T04M-1:725F1B T04W-38:00
Original Abstract: A data Interface for transferring digital data between a host and a client over a communication path using packet structures linked together to form a communication protocol for communicating a pre-selected set of digital control and presentation data. The signal protocol is used by link controllers configured to generate, transmit, and receive packets forming the communications protocol, and to form digital data into one or more types of data packets, with at least one residing in the host device and being coupled to the client through the communications path. The interface provides a cost-effective, low power, bi-directional, high-speed data transfer mechanism over a short-range "serial" type data link, which lends itself to implementation with miniature connectors and thin flexible cables which are especially useful in connecting display elements such as wearable micro-displays to portable computers and wireless communication devices. L'invention concerne une interface de donnees pour le transfert de donnees numeriques entre un hote et un client, sur un trajet de communication a structures en paquet reliees entre elles pour l'etablissement d'un protocole de communication capable d'assurer le transfert d'une serie predeterminee de donnees numeriques de controle et de presentation. Des unites de controle de liaison utilisent le protocole. Ce unites sont capables de produire, de transmettre et de recevoir des paquets formant le protocole, et aussi de presenter des donnees numeriques en un ou plusieurs types de paquets de donnees, sachant qu'au moins un de ces paquets reside dans le dispositif hote et est mis en relation avec le client via le trajet de communication. L'interface assure un mecanisme de transmission rentable, a faible consommation d'energie, bidirectionnel, a grande vitesse, sur une liaison de donnees du type "serie" a courte portee, qui se prete a la mise en oeuvre de connecteurs miniature et de cables flexibles fins particulierement utiles pour le raccordement d'elements d'affichage, du type micro-afficheurs pret-a-porter, a des ordinateurs portatifs et des dispositifs de communication hertziens.